# Advance Predictions of Solar Wind Conditions at L1: Quantifying Performance

### Agenda

- 17:15—17:20: Introduction (5 minutes) (Leila Mays)
- 17:20—17:35: Each team will present a very brief summary (~5 minutes/topic)
  - CME Arrival Time and Impact Working Team (Christine Verbeke)
  - 3D CME Kinematics and Topology Working Team (Barbara Thompson)
  - IMF Bz at L1 (Matt West on behalf of Neel Savani)
- 17:35—18:30: Open for discussion on each topic (~20 minutes/topic)

## International Forum on Space Weather Capabilities Assessment

The Forum brings together space environment experts, models developers, data providers, forecasters and end-users to

 define internationally recognized metrics that are meaningful and informative to end-users, developers, and decision makers;

evaluate the **current state** of space environment models, applications and forecasting techniques;

establish a procedure to quantify and track progress over time;

facilitate communications between forecasters and researchers;

address challenges in data-model comparison



https://ccmc.gsfc.nasa.gov/assessment/

#### SUPERTOPIC: QUANTIFYING SCIENTIFIC PROGRESS

CCMC facilitator(s): B.Thompson

• Solar Indices and Irradiance (Leads: J. Klenzing, C. Henney, K. Muglach) SSA-0

#### (Leads: A. Halford, S. Morley, A. Kellerman, B. Thompson)

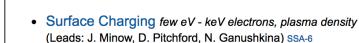
#### CCMC facilitator(s): P. Macneice

- Solar Flare Prediction (Leads: S. Murray, M. Georgoulis, S. Bloomfield, K.D. Leka
- Scoreboard Leads: S. Murray, M.L Mays) SSA-0,SSA-6
- Coronal & Solar Wind Structure Coronal & SW Structure; Ambient SW; Coronal Hole Boundaries
- (Leads: P. Macneice, L. Jian) SSA-?
- 3D CME kinematics and topology (Leads: B.Thompson, C.Moestl, D.Barnes)

#### **HELIOSPHERE** CCMC facilitator(s): M.L. Mays, A. Taktakishvili, P. Macneice

SOLAR

- CME Arrival Time (Leads: C. Verbeke, M.L. Mays, A. Taktakishvili) SSA-1 • IMF Bz at L1 (Leads: N. Savani, P. Riley) SSA-1
  - SEPs (Leads: I.G. Richardson. P. Quinn, M. Marsh, M.L. Mays Scoreboard Leads: M. Dierckxsens, M. Marsh) SSA-3,SSA-6



RADIATION and PLASMA EFFECTS Scope of work

CCMC facilitator(s): Y. Zheng, M. Kuznetsova

- Internal Charging keV-MeV electrons (Leads: P. O'Brien, Y. Shprits) SSA-6
- Single Event Effects MeV-GeV-TeV protons, ions
- (Leads: M. Xapsos, J. Mazur, P. Jiggens) SSA-3,SSA-6
- Total Ionizing Dose keV–MeV electrons, keV–GeV protons,ions (Leads: I. Jun, T. Guild, M. Xapsos) SSA-6
- Radiation effects for aviation (Leads: K. Tobiska, M. Meier) SSA-6

#### Ground Magnetic Perturbations: dBdt, delta-B, GICs, FACs

**GEOSPACE: Geomagnetic Environment** 

(Leads: D. Welling, H. Opgenoorth, C. Ngwira) SSA-1

CCMC facilitator(s): L.Rastaetter

 Magnetopause location and geosync. orbit crossing (Leads: Y. Collado-Vega, S. Merkin) SSA-1

Auroral precipitation and high latitude ionosphere electrodynamics

• Geomagnetic Indices (Leads: M. Liemohn) SSA-1

#### **GEOSPACE: Auroral Region** CCMC facilitator(s): M.Kuznetsova

(Leads: R. Robinson, Y. Zhang, B. Kosar)

#### **IONOSPHERE**

- CCMC facilitator(s): J. Shim, M. Kuznetsova

  - Neutral Density and Orbit Determination at LEO
  - (Leads: S. Solomon, T. Fuller-Rowell, S. Bruinsma, E. Sutton) SSA-2 • Global & Regional TEC (Leads: L. Scherliess, R. Calfas) SSA-4
  - Ionosphere Plasma Density: NmF2/foF2, hmF2, TEC
  - (Leads: I. Tsagouri, M. Angling, J. Shim) SSA-5 • Ionosphere Scintillation (Leads: E. Yizengaw) SSA-5

#### INFORMATION ARCHITECTURE CCMC facilitator(s): C. Wiegand

SPASE metadata implementation • Information Architecture for Interactive Archives (IAIA)

Assessment of Understanding and Quantifying Progress Toward Science Understanding and Operational Readiness

#### SOLAR

CCMC facilitator(s): P. Macneice

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#### **HELIOSPHERE**

CCMC facilitator(s): M.L. Mays, A. Taktakishvili, P. Macneice

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